TITLE 327 WATER POLLUTION CONTROL BOARD

IDEM'S SUGGESTED CHANGES TO PROPOSED RULE 327 IAC 2-11 CONCERNING GROUND WATER QUALITY STANDARDS LSA Document #99-263

Revisions made by LSA under the Administrative Rules Drafting Manual (IC 4-22-8-4(a) (2)) and incorporated into the printed version (LSA Document #99-263) have been made in the version of the rule presented to the board for final adoption.

- Page 2 1. 327 IAC 2-11-2(a)
 Insert "facilities, practices, and" after "to apply the standards established in this rule to the"
- Page 2 2. 327 IAC 2-11-2(b)

 Delete subsection (b)
- Page 2 3. 327 IAC 2-11-2(c)
 Reletter subsection (c) as subsection (b)
- Page 2 4. 327 IAC 2-11-2(c)

Insert "sections 5, 6, 7, and 8 of" after "An agency shall use its regulatory authority when adopting rules to ensure the criteria established in"

Delete "may" after "When adopting rules, an agency" Insert "shall" after "When adopting rules, an agency" Delete "apply" after "to the extent consistent with its regulatory authority,"

Insert "ensure that facilities, practices, and activities are designed and managed to eliminate or minimize, to the extent feasible, potential adverse impacts to the existing ground water quality by applying" after "to the extent consistent with its regulatory authority," Insert a period "." after "preventative action levels, design standards, a monitoring framework, or other regulatory methods"

Delete "to ensure that facilities, practices, and activities are designed and managed to eliminate or minimize potential adverse impacts to the existing ground water quality." after "preventative action levels, design standards, a monitoring framework, or other regulatory methods"

Insert "An agency may consider technological and economic reasonableness and other appropriate factors in determining a feasible approach." after "preventative action levels, design standards, a monitoring framework, or other regulatory methods"

Page 2 5. 327 IAC 2-11-2(d)
Reletter subsection (d) as subsection (c)

Page 2 6. 327 IAC 2-11-2(e)

Reletter subsection (e) as subsection (d)

Delete ", as appropriate, ground water remediations" after "The standards established in this rule shall allow"

Insert "the following" after "The standards established in this rule shall allow"

Delete "." (period) and insert ":" (colon) after "the remediation objectives set forth in IC 13-25-5-8.5"

Insert the following three (3) subdivisions after "the remediation objectives set forth in IC 13-25-5-8.5"

- "(1) Ground water remediations conducted under:
 - (A) IC 13-22:
 - (B) IC 13-23; or
 - (C) IC 13-25-5.
- (2) Ground water remediations that:
 - (A) are not emergency or non time-critical activities; and
 - (B) are conducted under:
 - (i) IC 13-24; or
 - (ii) IC 13-25-4.
- (3) Ground water remediations conducted under any other provision of IC 13, as appropriate."
- Page 2 7. 327 IAC 2-11-2(f)
 Delete subsection (f)
- Page 2 8. 327 IAC 2-11-2(e)

Insert a new subsection (e) to read as follows:

- "(e) No person shall cause the ground water in a drinking water supply well to have a contaminant concentration that creates one (1) or more of the following:
 - (1) An exceedance of the numeric criteria established for drinking water class ground water in Tables 6(a)1 and 6(a) 2 of this rule.
 - (2) A level sufficient to be acutely or chronically toxic, carcinogenic, mutagenic, teratogenic, or otherwise injurious to human health based on best scientific information.
 - (3) An exceedance of one (1) or more of the following indicator levels:
 - (A) Chloride at two hundred fifty (250) milligrams per liter.
 - (B) Sulfate at two hundred fifty (250) milligrams per liter:
 - (C) Total dissolved solids at five hundred (500) milligrams per liter;
 - (D) Total coliform bacteria at nondetect.
 - (4) Renders the well unuseable for normal domestic use."

Page 2 9. 327 IAC 2-11-2(**f**)

Insert a new subsection (f) to read as follows:

"(f) No person shall cause the ground water in a non-drinking water supply well, including an industrial, commercial, or agricultural supply well, to have a contaminant concentration that, based on best scientific information, renders the well unuseable for its current use."

Page 2 10. 327 IAC 2-11-2(g)

Insert a new subsection (g) to read as follows:

"(g) The criteria established in subsections (e) and (f) are immediately enforceable on the effective date of this rule under IC 13-30 to protect ground water quality in water supply wells."

Page 2 11. 327 IAC 2-11-2(h)

Insert a new subsection (h) to read as follows:

"(h) Except as provided in subsection (g), the criteria established in this rule shall not be enforceable under IC 13-30 until subsequent rules are adopted to apply the standards established in this rule pursuant to subsections (a) and (b)."

Page 3 12. 327 IAC 2-11-3(8)

Insert into the definition of Ground water management zone "at and beyond the boundary of the region" after "such that the criteria established in this rule are met"

Page 3 13. 327 IAC 2-11-3(10)

Insert the following new definition:

- "(10) "Preventative action level" means a measured concentration of a chemical constituent that is:
 - (A) established on a site-specific or program-specific basis;
 - (B) used to evaluate sample analysis data from ground water monitoring systems;
 - (C) statistically measurable using standard laboratory analyses; and
 - (D) used to determine if further action is necessary to ensure the standards established in this rule are not violated."

Page 3 14. 327 IAC 2-11-3(10)

Renumber subdivision (10) as (11)

Page 3 15. 327 IAC 2-11-3(11)

Renumber subdivision (11) as (12)

Page 4 16. 327 IAC 2-11-3(12)

Renumber subdivision (12) as (13)

Page 4 17. 327 IAC 2-11-4(a)

Delete "for purposes of determining" after "All ground water shall be classified"

Insert ", under rules adopted under IC 4-22-2 that apply the standards established in this rule, to determine" after "All ground water shall be classified"

Delete "the" after "the appropriate narrative and numeric criteria and level of protection to be applied to"

Delete "All ground water is drinking water class ground water unless it is classified as:"

Page 4 18. 327 IAC 2-11-4(a)(1)

Delete subdivision (1)

Page 4 19. 327 IAC 2-11-4(a)(2) Delete subdivision (2)

Page 4 20. 327 IAC 2-11-4(**b**)

Insert a new subsection (b) to read as follows:

- "(b) Ground water shall be classified as drinking water class ground water unless it is classified as:
 - (1) limited class ground water under subsection (c),(d),(e), or (f); or
 - (2) impaired drinking water class ground water under subsection (g)."

Page 4 21. 327 IAC 2-11-4(b)

Reletter subsection (b) as subsection (c)

Delete "is naturally" after "Ground water is"

Insert "shall be" after "Ground water is"

Delete "under this rule" after "limited"

Page 4 22. 327 IAC 2-11-4(b)(2)

Insert "(42 U.S.C. 300)" after "issued under the Safe Drinking Water Act"

Page 4 23. 327 IAC 2-11-4(c)

Reletter subsection (c) as subsection (d)

Delete "is naturally" after "Ground water is"

Insert "shall be" after "Ground water is"

Delete "under this rule" after "limited"

Delete "is in accordance with" after "if it"

Insert "has constituent concentrations that are the result of natural processes acting on post mine hydrology and is located within" after "if it"

Insert a colon ":" after "one (1) of the following"

Delete "conditions:" after "one (1) of the following"

Page 4 24. 327 IAC 2-11-4(c)(1)

Delete all the language of subdivision (1)

Insert new language in subdivision (1) to read as follows:

"A coal mine area that:"

Insert the following new clauses (A) and (B):

- ``(A) has satisfied the requirements of IC 14-34 and is fully released from the performance bond required by IC 14-34-6; and
- (B) is within a zone defined by the coal mine permit as it was formerly approved and regulated by the department of natural resources unless it is within a demonstrated zone of influence of a coal mine area as determined by the commissioner in consultation with the department of natural resources."

Page 4 25. 327 IAC 2-11-4(c)(2)

Delete "Located in" before "the zone of influence"

Insert ", as determined by the commissioner in cooperation with the department of natural resources," after "the zone of influence"

Page 4 26. 327 IAC 2-11-4

Insert a new subsection (e) following the preliminarily adopted subsection (c) to read as follows:

"(e) Ground water shall be limited if it is located within an agricultural crop root zone. A limited classification under this subsection shall extend no deeper than ten (10) feet below the land surface."

Page 5 27. 327 IAC 2-11-4(d)

Reletter subsection (d) as subsection (f)

Delete "naturally" after "The commissioner may classify ground water as"

Page 5 28. 327 IAC 2-11-4(d)(1)(D)

Insert "established" after "Not in a state-approved wellhead protection area"

Page 5 29. 327 IAC 2-11-4

Insert a new subsection (g) following the preliminarily adopted subsection (d) that has been changed to subsection (f) to read as follows:

- (g) Ground water is impaired drinking water when the following conditions are met:
 - (1) The ground water is not in a state-approved wellhead protection area established pursuant to 327 IAC 8-4.1.
 - (2) The ground water has one (1) or more contaminant

concentrations above the numeric criteria established in section 6(a) or 6(d) of this rule.

- (3) The commissioner has approved a ground water remediation, closure, cleanup, or corrective action plan that describes the nature and extent of contaminants exceeding the criteria established in section 6(a) or 6(d), and one (1) of the following applies:
 - (A) A restrictive covenant has been placed on the property or properties overlying the ground water, and it prohibits the use of the untreated ground water.
 (B) An alternate institutional control, such as a local ordinance, prohibits the use of the untreated ground water as a source of residential drinking water, and the commissioner has approved the alternate institutional control as an effective means of preventing exposure to the untreated ground water.
- Page 5 30. 327 IAC 2-11-4(e)
 Reletter subsection (e) as subsection (h)
 Insert "or 6(d)" after "established in section 6(a)"
- Page 5 31. 327 IAC 2-11-4(e)(1)(A)
 Delete "shall" after "in a hydrogeologic report that"
 Insert "must" after "in a hydrogeologic report that"
- Page 5 32. 327 IAC 2-11-4(e)(1)(A)(ii)
 Insert "that includes the concentration" after "A description"
 Insert "or 6(d)" after "established in section 6(a)"
- Page 5 33. 327 IAC 2-11-4(e)(1)(B)(i)

 Delete "remove" after "The ground water is treated to"

 Insert "reduce" after "The ground water is treated to"

 Insert "or 6(d)" after "established in section 6(a)"
- Page 5 34. 327 IAC 2-11-4(e)(1)(B)(ii)
 Insert "or 6(d)" after "established in section 6(a)"
- Page 5 35. 327 IAC 2-11-4(e)(1)(C) Insert "established" after "Not in a state-approved wellhead protection area"
- Page 6

 36. 327 IAC 2-11-4(f)
 Reletter subsection (f) as subsection (i)
 Insert "drinking water class ground water" after "The commissioner may deny a request to classify ground water as impaired"
 Insert "or 6(d)" after "established in section 6(a)"

Insert "drinking water class" after "Notwithstanding the impaired" Insert "or a ground water contamination assessment or remediation" after "a facility, practice, or activity"

Insert "drinking water class ground water" after "land area above the ground water classified as impaired"

37. Page 6 327 IAC 2-11-4(g)

Reletter subsection (g) as subsection (j)

Insert "and change" after "The commissioner may reevaluate"

Page 6 38. 327 IAC 2-11-5(1)

> Delete "existing" after "to protect the" Insert "current" after "to protect the"

Page 6 39. 327 IAC 2-11-5(2)

Delete subdivision (2)

Page 6 40. 327 IAC 2-11-5(3)

Reletter subdivision (3) as subdivision (2)

Page 6 41. 327 IAC 2-11-5(4)

Delete subdivision (4)

Page 7 42. 327 IAC 2-11-6(a)

> Delete ", they establish" after "health protective goals for untreated ground water used as drinking water"

> Insert "and are" after "health protective goals for untreated ground water used as drinking water"

> Insert a colon ":" after "contaminant in drinking water class ground water"

Delete "and apply to drinking water class ground water at and beyond the boundary of the ground water management zone established according to section 9 of this rule:" after "contaminant in drinking water class ground water"

Page 7 43. 327 IAC 2-11-6(a)(1)

> Delete from Table 6(a)(1) the left most column and all its entries concerning chemical abstract registry numbers

Delete "** No Chemical Abstract Service Number exists for this contaminant." from the Notes contained in the bottom box of Table 6(a)(1)

Page 9 44. 327 IAC 2-11-6(a)

> Insert after the Table 6(a)(2) an additional subdivision (3) that reads as follows: "(3) A drinking water class numeric criterion may be added to the criteria established in this subsection if adopted according to IC

4-22-2 and IC 13-14-9."

Page 9	45.	327 IAC 2-11-6(b) Delete subdivision (b)
Page 10	46.	327 IAC 2-11-6(c) Reletter subsection (c) as subsection (b)
Page 10	47.	327 IAC 2-11-6(d) Reletter subsection (d) as subsection (c) Insert "site-specific" after "If the commissioner determines that a" Insert "to protect human health, any natural resource, or the environment" after "numeric criterion established in subsection (a) is necessary"
Page 10	48.	327 IAC 2-11-6(e) Reletter subsection (e) as subsection (d) Delete "this section." after "numeric criterion established in" Insert "subsection (a) or (c) or an indicator level established in subsection (b)." after "numeric criterion established in"
Page 10	49.	327 IAC 2-11-6(f) Reletter subsection (f) as subsection (e) Delete "the result of" after "numeric criteria established in this section that are not" Insert "attributable to" after "numeric criteria established in this section that are not"
Page 10	50.	327 IAC 2-11-6(f)(2) Insert "at least" after "that apply to the facility, practice, or activity are"
Page 10	51.	327 IAC 2-11-6(g) Reletter subsection (g) as subsection (f) Insert "or (d)" after "numeric criterion established in subsection (a)"
Page 10	52.	327 IAC 2-11-7 Delete " naturally " from the title of section 7
Page 11	53.	327 IAC 2-11-7(a) Delete "Naturally" before "limited ground water," Insert "class" between "limited" and "ground water," Delete "4(b)" after "classified according to section" Insert "4(c)" after "classified according to section" Delete "shall comply with" before "the narrative criteria established in section 5 of this rule."

Insert "must meet" before "the narrative criteria established in section 5 of this rule."

Page 11 54. 327 IAC 2-11-7(b)

Delete "Naturally" before "limited class ground water," Delete "4(c)" after "classified according to section" Insert "4(d)" after "classified according to section" Delete "shall" before "meet the following requirements:" Insert "must" before "meet the following requirements:"

Page 11 55. 327 IAC 2-11-7(b)(1) Delete subdivision (1)

Page 11 56. 327 IAC 2-11-7(b)(2)

Renumber subdivision (2) as subdivision (1)

Insert ", not including the disposal of coal combustion waste at a surface coal mine under IC 14-34," after "A contaminant attributable to activities associated with coal mining"

Delete "shall" after "activities associated with coal mining" Insert "must" after "activities associated with coal mining" Delete "one (1)" after "shall meet" Insert "the greater" after "shall meet"

Page 11 57. 327 IAC 2-11-7(b)(2)(A)

Insert a period "." after "contaminant concentration"

Delete "if it is greater than the numeric criterion established in section 6(a) of this rule." after "contaminant concentration"

Page 11 58. 327 IAC 2-11-7(b)(2)(B)

Insert a period "." after "criterion established in section 6(a) of this rule"

Delete "if it is not greater than the numeric criterion established in section 6(a) of this rule." after "criterion established in section 6(a) of this rule"

Page 11 59. 327 IAC 2-11-7(b)(3)

Renumber subdivision (3) as subdivision (2)

Delete "a contaminant attributable to an activity regulated under 310 IAC 12-3-93.1," after "activities associated with coal mining, including"

Insert "the disposal of coal combustion waste at a surface coal mine under IC 14-34," after "activities associated with coal mining, including"

Delete "shall" after "the concentration attributable to a coal mining activity,"

Insert "must" after "the concentration attributable to a coal mining

activity,"

Insert "or 6(d)" after "criterion established in section 6(a)"

Page 11 60. 327 IAC 2-11-7(c)

Insert a new subsection (c) to read as follows:

- "(c) Limited class ground water, classified according to section 4(e) of this rule, must meet the following requirements:
 - (1) A contaminant attributable to pesticides, crop nutrients, or soil amendments that have been applied for agricultural purposes and used in a manner consistent with all applicable regulatory requirements shall meet the greater of the following:
 - (A) The existing contaminant concentration.
 - (B) The numeric criterion established in section 6(a) of this rule.
 - (2) A contaminant not attributable to pesticides, crop nutrients, or soil amendments that have been applied for agricultural purposes and used in a manner consistent with all applicable regulatory requirements must meet the numeric criterion established in section 6(a) or 6(d) of this rule."

Page 11 61. 327 IAC 2-11-7(c)

Renumber subsection (c) as (d)

Delete "Naturally" before "limited class ground water,"

Delete "4(d)" after "according to section"

Insert "4(f)" after "according to section"

Delete "shall" before "meet the following requirements:"

Insert "must" before "meet the following requirements:"

Page 11 62. 327 IAC 2-11-7(c)(1)

Delete subdivision (1)

Page 11 63. 327 IAC 2-11-7(c)(2)

Renumber subdivision (2) as (1)

Delete "shall" after "A contaminant with a drinking water class numeric criterion established in section 6(a) of this rule" Insert "must" after "A contaminant with a drinking water class numeric criterion established in section 6(a) of this rule" Delete "criterion determined by one (1) of the following:" after "in section 6(a) of this rule shall have a"

Insert "numeric criterion of ten (10) times the drinking water class numeric criterion established in section 6(a) of this rule." after "in section 6(a) of this rule shall have a"

Page 11 64. 327 IAC 2-11-7(c)(2)

Delete the following rule parts in subdivision (2):

Clause (A), including (A)(i) and (A)(ii) Clause (B)

Page 11 65. 327 IAC 2-11-7(c)(3)

Renumber subdivision (3) as (2)

Delete ", the contaminant shall have a criterion determined according to subdivision (2)(A)." after "established in subsection 6(a) of this rule is necessary"

Insert "to protect human health, any natural resource, or the environment, a risk analysis shall be used to establish a numeric criterion for that contaminant and must:" after "established in subsection 6(a) of this rule is necessary"

Insert the following new clauses (A) and (B):

"(A) receive approval from the commissioner; and

(B) be based on appropriate toxicological data."

Page 11 66. 327 IAC 2-11-7(c)(4)

Reletter subdivision (4) as subsection (e)

Delete "naturally" after "concentration of a contaminant in"

Delete "naturally" after "concentration greater than the"

Delete "this" after "numeric criterion established in"

Delete the period punctuating the end of "established in this subsection" Insert "(b), (c), or (d)." after "established in this subsection"

Page 11 67. 327 IAC 2-11-7(c)(5)

Reletter subdivision (5) as subsection (f)

Delete "naturally" after "If"

Delete "subsection" after "the numeric criteria established in this" Insert "section" after "the numeric criteria established in this" Delete "the result of" before "the facility, practice, or activity under consideration"

Insert "attributable to" before "the facility, practice, or activity under consideration"

Page 12 68. 327 IAC 2-11-7(c)(5)(A)

Reletter clause (A) as subdivision (1)

Delete "subsection" after "the numeric criteria established in this" Insert "section" after "the numeric criteria established in this"

Page 12 69. 327 IAC 2-11-7(c)(5)(B)

Reletter clause (B) as subdivision (2)

Insert "at least" after "that apply to the facility, practice, or activity are"

Delete "subsection" after "the numeric criteria established in this" Insert "section" after "the numeric criteria established in this"

Page 12 70. 327 IAC 2-11-7(c)(6) Reletter subdivision (6) as subsection (g) Delete ", for a ground water contamination assessment or remediation at a facility, practice, or activity under the jurisdiction of the department of environmental management," Delete "subsection" after "the numeric criteria established in this" Insert "section" after "the numeric criteria established in this" Delete "naturally" after "to be applied to" Delete "within" after "limited class ground water" Insert "at and beyond" after "limited class ground water" 71. Page 12 327 IAC 2-11-8 Delete "4(e)" after "classified according to section" Insert "4(g) or 4(h)" after "classified according to section" Page 12 72. 327 IAC 2-11-8(1) Delete subdivision (1) Page 12 73. 327 IAC 2-11-8(2) Renumber subdivision (2) as (1) Delete "6(e)" after "the numeric criterion of section 6(a) or" Insert "6(d)" after "the numeric criterion of section 6(a) or" Delete "one (1) of the following:" Page 12 74. 327 IAC 2-11-8(2)(A) Delete the clause indicator "(A)" but retain the text as the conclusion of the sentence begun in subdivision (2) Delete "6(e)" after "the numeric criterion of section 6(a) or"

Insert "6(d)" after "the numeric criterion of section 6(a) or"

Page 12 75. 327 IAC 2-11-8(2)(B)

Delete the following rule parts in subdivision (2): Clause (B), including (B)(i), (B)(ii), and (B)(iii)

Page 12 76. 327 IAC 2-11-8(3)

Renumber subdivision (3) as (2)

Delete "6(e)" after "the numeric criterion of section 6(a) or" Insert "6(d)" after "the numeric criterion of section 6(a) or" Delete "one (1) of the following:"

Page 12 77. 327 IAC 2-11-8(3)(A)

> Delete the clause indicator "(A)" but retain the text as the conclusion of the sentence begun in subdivision (3)

Delete "6(e)" after "the numeric criterion of section 6(a) or" Insert "6(d) of this rule" after "the numeric criterion of section 6(a) or"

Page 12	78.	327 IAC 2-11-8(3)(A)(i) Reletter item (i) as clause (A)
Page 12	79.	327 IAC 2-11-8(3)(A)(ii) Reletter item (ii) as clause (B)
Page 13	80.	327 IAC 2-11-8(3)(A)(iii) Reletter item (iii) as clause (C)
Page 13	81.	327 IAC 2-11-8(3)(B) Delete the following rule parts in subdivision (3): Clause (B), including (B)(i), (B)(ii), and (B)(iii)
Page 13	82.	327 IAC 2-11-8(4) Renumber subdivision (4) as (3) Insert "drinking water" after "that apply to a facility, practice, or activity with impaired" Insert "at least" before "as stringent as the design standard and management requirements"
Page 13	83.	327 IAC 2-11-8 Insert a new subdivision (4) to read as follows: "(4) The commissioner may allow an appropriate site specific, risk based numeric criterion different from the numeric criterion established in this section to be applied to impaired drinking water class ground water at and beyond the boundary of the ground water management zone established according to section 9 of this rule."
Page 13	84.	327 IAC 2-11-9(a) Insert "sections 5, 6, 7, and 8 of" after "The criteria established in"
Page 13	85.	327 IAC 2-11-9(b) Delete subsection (b)
Page 13	86.	327 IAC 2-11-9(c) Reletter subsection (c) as (b) Insert "three (3) dimensional" after "appropriate program specific or site specific" Insert "and shall determine its boundary location and duration" after "ground water management zone" Insert an additional subdivision following subdivision (7) to read as follows: "(8) Physical and chemical properties of potential contaminants."
Page 13	87.	327 IAC 2-11-9(d) Reletter subsection (d) as (c)

Insert "that is subject to the criteria of this rule" after "contamination assessment or remediation"

Insert "three (3) dimensional" after "appropriate program specific or site specific"

Insert two additional subdivisions following subdivision (7) to read as follows:

- "(8) Expected future use of the site.
- (9) Physical and chemical properties of existing contaminants."

Page 14 88. 327 IAC 2-11-9(e)

Reletter subsection (e) as (d)

Insert "Rules adopted by an agency under IC 4-22-2 to apply the standards in this rule must include" before "A default"

Insert "three (3) dimensional" after "A default"

Insert "that" before "shall apply if an agency having jurisdiction over" Delete "has" after "or a ground water contamination assessment or remediation"

Insert "does" after "or a ground water contamination assessment or remediation"

Delete "established" before "a program specific or site specific ground water management zone under subsection (b) or (c)."

Insert "establish" before "a program specific or site specific ground water management zone under subsection (b) or (c)."

Page 14 89. 327 IAC 2-11-9(f)

Reletter subsection (f) as (e)

Delete "or" after "boundaries are present at a facility, practice," Delete "an" after "activity,"

Insert "or ground water contamination assessment or remediation, then the" before "agency"

Insert "or agencies with jurisdiction" after "agency"